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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eric E. Ellingson

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08/23/2004

DIGIMARC CORPORATION
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EXAMINER

PATEL, SHEFALI D

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/585,678

Applicant(s)

ELLINGSON, ERIC E.

Examiner

Shefali D Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The response after final rejection was received on June 7, 2004.
2. Claim objection made to claims 2-3 has been withdrawn.

Response to Arguments

1. Applicant's arguments, see pages 7-8 of remarks, filed on June 7, 2004, with respect to the rejection(s) of claim(s) 1-2, 4, and 11 under 35 U.S.C. 102(e) and claims 3, 5-10, and 12-25 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Borza (US 5,995,630).
2. With regards to applicant's argument on page 8 about a *prima facie* case of obviousness regarding reference by Musgrave, the examiner disagrees. The examiner restates the obviousness regarding the reference of Borza in view of Musgrave below.

Please note the test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F. 2d 588,591,18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F. 2d 413,425,208 USPQ 871,881,(CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would be reasonably be expected to draw therefrom. In re Preda, 401 F. 2d 825,826,159 USPQ 342, 344 (CCPA 1968).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 4-5, 11¹⁶, 20, 23, and 25-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Borza (US 5,995,630).[^]

With regard to **claim 1** Borza discloses a method for capturing and encoding a user attribute (Fig. 3) in a media signal (i.e., an image/video frame), the method comprising: in a media signal capture device (imaging device 120, Fig. 4, col. 8 lines 31-32; CCD 14, col. 11 lines 34-40), capturing a user attribute of a user of the media signal capture device (capturing a fingerprint, col. 7 lines 4-6; col. 11 lines 62-63); wherein the user attribute comprises an image of an identifying characteristic of the user (See, col. 7 lines 8-11); encoding a representation of the user attribute into a media signal captured by the media signal capture device (See, col. 7 lines 11-21 and 53-56; col. 13 lines 26-30). Note that encoding process and advantages at col. 6 lines 48-65 in Borza.

With regard to **claim 2** Borza discloses the user attribute (i.e., Fingerprint) forming at least part of an auxiliary message (capturing a data of the fingerprint at col. 7 lines 4-6) and embedding the auxiliary message into the media signal (col. 7 lines 9-14).

With regard to **claim 4** Borza discloses the media signal (i.e., image/video frame at col. 7 lines 3-21) is being an image (col. 7 lines 3-6) and the media signal capture device is a camera (CCD at col. 11 lines 34-38) or (scanner).

With regard to **claim 5** Borza discloses the media signal is being a sequence of video frames (col. 7 lines 15-21; col. 10 lines 50-56) and the media signal capture device is a video camera (col. 10 lines 56-60).

Claim 11 recites identical features as claim 1 except claim 11 is a system claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 11. Applicant's attention is invited to Fig.8 of Borza where a system is disclosed.

Claim 16 recites identical features as claim 5 except claim 16 is a device claim. Thus, arguments similar to that presented above for claim 5 is equally applicable to claim 16.

Claim 20 is rejected the same as claim 1. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 20. Claim 20 distinguishes from claim 1 only in that it recites a decoding claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 20. Applicant's attention is invited to col. 11 lines 65 to col. 12 lines 1-5 where decoding is disclosed in Borza.

With regard to **claim 23** Borza discloses the user attribute data comprising a fingerprint scan (See, col. 7 lines 3-6).

Claim 25 recites identical features as claim 1 except claim 25 is a computer readable medium claim. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 25. Applicant's attention is invited to Fig.8 of Borza where a computer readable medium is disclosed.

Claim 26 recites identical features as claim 1. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 11. Applicant's attention is invited to col. 8 lines 42-47 and col. 9 lines 20-22 of Borza where a device for certain operator (i.e., a user) is disclosed.

Claim 27 recites identical features as claim 26. Thus, arguments similar to that presented above for claim 26 is equally applicable to claim 27. Applicant's attention is invited to col. 11 lines 34-64 of Borza where a sensor (i.e., a CCD) unit is disclosed.

Claim 28 recites identical features as claim 26. Thus, arguments similar to that presented above for claim 26 is equally applicable to claim 28. Applicant's attention is invited to Figure 4 and 4b (elements 112c and 112e, respectively) of Borza where a user's identification data is compared with a stored data. See, col. 8 lines 48-59.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 15, 17-19, 21-22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borza (US 5,995,630) in view of Musgrave (hereinafter, "Musgrave '746") (US 6,208,746).

With regard to **claim 3** Borza discloses embedding the auxiliary message into the media signal as disclosed above in claim 2. Borza does not expressly disclose steganographically

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embedding the auxiliary message into the media signal such that the message is substantially imperceptible to a human. Musgrave '746 discloses this at encoder 26, which embeds biometric data 24 in data bit stream 20, col. 3 lines 41-49 and Musgrave also discloses "electronic watermarks for electronic transactions... accordingly, end-to-end electronic transactions are provided with secure authentication and protection from fraud and unauthorized use, such as by theft" at col. 4 lines 40-47. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Musgrave '746 with Borza. The motivation for doing so is that Borza suggest one way to superimpose data information with the data information of the user and also Musgrave '746 teaches steganographically embedding information into the media signal at col. 3 lines 40-49 and col. 3 lines 60 to col. 4 lines 1-5. Therefore, it would have been obvious to combine Musgrave '746 with Borza to obtain the invention as specified in claim 3.

With regard to **claim 15** Musgrave '746 discloses encoder for embedding the user attribute into the media signal (encoder 26 embedding biometric data 24 in data bit stream 20, col. 3 lines 41-49).

With regard to **claim 17** Musgrave '746 discloses the user attribute capture unit including an image sensor for capturing the image of the identifying characteristic of the user (image sensor within the scanner used to scan the biometric data of the user. See, col. 3 lines 19-22).

With regard to **claim 18** Musgrave '746 discloses user attribute including a voice recording (i.e., speech pattern, See, col. 3 line 221-23).

With regard to **claim 19** Musgrave '746 discloses user attribute being a retinal scan (See, col. 3 line 20).

With regard to **claim 21** Musgrave '746 discloses the decoding (decoder 30) comprising steganographically decoding the representation of the user attribute data from the media signal (decoding biometric watermark at col. 4 lines 36-39).

With regard to **claim 22** Musgrave '746 discloses the user attribute data comprising a retinal scan (See, col. 3 line 20).

With regard to **claim 24** Musgrave '746 discloses the user attribute data comprising a representation of a voice recording and the representation derived from the image of the identifying characteristic of the user (speech recognition, See, col. 3 line 221-23).

5. Claims 6-10, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borza (US 5,995,630) in view of Swartz et al. (US 5,767,496) (hereinafter, "Swartz").

Claim 6 is rejected the same as claim 1. Thus, arguments similar to that presented above for claim 1 is equally applicable to claim 6. Claim 6 distinguishes from claim 1 only in that it recites the media signal capture device being a camera with an eyepiece and including: capturing a retinal scan of the user through the eyepiece. Swartz discloses the media signal capture device being a camera with an eyepiece (video camera at col. 4 lines 5 and 14-19) and including: capturing a retinal scan of the user through the eyepiece (col. 3 lines 66 to col. 4 lines 1-12). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Swartz with Borza. The motivation for doing so is that it would be obvious to take an image of the retina (the same way the image of fingerprint is being captured in Borza) to compare and authenticate the user for certain accessibility right and for ownership (col.

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4 lines 10-12). Therefore, it would have been obvious to combine Swartz with Borza to obtain the invention as specified in claim 6.

With regards to **claim 7**, the recited features are the same as those in claim 1 (i.e., capturing the retinal scan of the user and encoding), and the arguments in paragraphs 2 and 4 above as to the relevance of Swartz are incorporated herein.

With regard to **claim 8** Swartz discloses image sensor at col. 4 lines 3-6 where Swartz discloses hardware to capture a retinal image.

With regard to **claim 9** Swartz discloses the image sensor used to capture the retinal scan the same as the image sensor in the camera (image sensor is connected to the camera (or, scanner) as seen in Fig. 2).

With regard to **claim 10** Swartz discloses hashing a retinal scan image into retinal scan data (the biometric image scanned is transferred into biometric encoded symbol 70. See, col. 3 lines 66 to col. 4 lines 1-10).

Claim 12 recites identical features as claim 6 except claim 12 is a device claim. Thus, arguments similar to that presented above for claim 6 is equally applicable to claim 12.

With regard to **claim 13** Swartz discloses camera and a scanner that includes an image sensor.

Claim 14 recites identical features as claim 7. Thus, arguments similar to that presented above for claim 7 is equally applicable to claim 14.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D Patel whose telephone number is 703-306-4182. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DANIEL MIRIAM
PRIMARY EXAMINER
August 16, 2004

Shefali D Patel
Examiner
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